



Recombinant Protein Technical Manual

Recombinant Human DMP1 Protein (His Tag)

RPES2187

Product Data:

Product SKU: RPES2187

Size: 10µg

Species: Human

Expression host: Human Cells

Uniprot: Q13316

Protein Information:

Molecular Mass: 55.0 kDa

AP Molecular Mass: 5211 kDa

Tag: C-6His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from a 0.2 µm filtered solution of 20mM PB,150mM NaCl,pH7.4.

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Dentin Matrix Acidic Phosphoprotein 1; DMP; Dentin Matrix Protein 1; DMP1;ARHP;ARHR

Immunogen Information:

Sequence: Lys17-Tyr513

Background:

Dentin Matrix Acidic Phosphoprotein 1 (DMP) is an extracellular matrix protein and a member of the small integrin binding ligand N-linked glycoprotein family. DMP is expressed in teeth particularly in odontoblast, ameloblast, and cementoblast. DMP is critical for proper mineralization of bone and dentin. DMP may have a dual function during osteoblast differentiation. In the nucleus of undifferentiated osteoblasts, the unphosphorylated form of DMP acts as a transcriptional component for activation of osteoblast-specific genes like osteocalcin. During the osteoblast to osteocyte transition phase, DMP is phosphorylated and exported into the extracellular matrix, where it regulates nucleation of hydroxyapatite. DMP mutations have also been shown to cause rickets hypophosphatemic autosomal recessive type 1 (ARHR1).